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EPA's Transportation Partners

Shortcuts

Smart Moves for Healthier Communities

Transportation and Global Climate Change

Global climate change has emerged as a major environmental concern. The 1996 report of the Intergovernmental Panel on Climate Change expressed a scientific consensus that human-made "greenhouse gases" — including carbon dioxide, chlorofluorocarbons, and methane — are building up in the Earth's atmosphere, and that the temperature of the atmosphere is increasing as a result. This rise in temperature is referred to as global climate change, global warming, or the greenhouse effect. Although the predicted increase in average global temperature may not seem like much — an increase between 1.8 and 6.3 degrees Fahrenheit is predicted by 2100 (compared to 1990) — scientists think it will be enough to raise sea levels. Changes in temperature and rainfall in particular regions are more difficult to predict and the impact on different ecosystems remains uncertain. Nevertheless, agriculture, aquaculture, plants and animals will have to adapt or move as the climates and habitats that support them change. These climate-induced shifts will likely impose significant economic and social costs.

◆ How Does Global Climate Change Work?

Burning fossil fuels — primarily coal, petroleum, and natural gas — releases carbon dioxide into the air. Carbon dioxide, chlorofluorocarbons and methane in the atmosphere trap heat from the sun and warm the Earth, just as panes of glass in a greenhouse trap the heat from sunlight. Increases in greenhouse gases are projected to result in temperature changes that would occur at a rate significantly faster than any since the last ice age more than 10,000 years ago.

Any process that burns a fossil fuel contributes to global warming. Electrical generators that burn coal, furnaces and boilers that burn fuel oil, and cars and trucks that burn gasoline and diesel fuel are all human-made sources of carbon dioxide. Since the amount of carbon dioxide released is directly related to the amount of fuel burned, fuel efficiency is an important determinant of overall emissions of greenhouse gases. Overall production of electricity and the number of miles driven also affect the amount of greenhouse gases emitted. Obtaining a given amount of energy from various fuels results in different amounts of carbon dioxide emissions; burning petroleum produces less carbon dioxide than coal, but burning natural gas produces less carbon dioxide than either coal or petroleum.

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PRINCIPAL PARTNERS

Association for Commuter Transportation
(202) 393-3497

Bicycle Federation of America, Inc.
(202) 463-6622

Center for Clean Air Policy
(202) 408-9260

Environmental Defense Fund
(202) 387-3500

International Council for Local Environmental Initiatives
(510) 540-8843

Local Government Commission: Center for Livable Communities
(916) 448-1198 or
(800) 290-8202

Public Technology, Inc.
(202) 626-2400 or
(800) 852-4934

Renew America
(202) 232-2252
or (800) 922-RENEW

Surface Transportation Policy Project
(202) 939-3470

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What Role Does Transportation Play in Global Climate Change?

Transportation accounted for nearly one-third of all carbon dioxide emissions from the U.S. in 1990 and the transportation sector is expected to have the fastest growth in these emissions of any part of the U.S. economy during this decade. This growth is the result of two trends: 1) the average fuel economy of the new personal vehicle fleet has decreased since 1988, and 2) the number of miles driven by Americans continues to rise. The drop in fuel economy is largely a result of a shift toward larger vehicles, such as sport utility vehicles, that have lower gas mileage than cars. While some vehicle models may be improving mileage efficiency over time, as a nation we are still buying less efficient models. The causes of the increase in number of miles driven include declining crude oil prices (since 1981) and population shifts to urban fringes. These trends have helped the transportation sector's 1995 contribution to national carbon dioxide emissions output to reach 1,663 million metric tons. Personal automobile travel accounts for roughly two-thirds of these emissions and the average U.S. vehicle generates about five metric tons of carbon dioxide emissions per year.

Working Together to Limit Climate Change

Addressing global climate change will require a concentrated, international effort. More than 160 countries are now Parties to the U.N. Framework Convention on Climate Change, signed into effect at the 1992 Earth Summit in Rio de Janeiro, Brazil. Under terms of the agreement, the U.S. is currently working with other countries to develop strategies aimed at reducing the growth in emissions of greenhouse gases. The negotiating process has produced a variety of proposals detailing global emissions reduction targets. In October of 1993, President Clinton unveiled the Climate Change Action Plan as a response to our international pledge to return greenhouse gas emissions from the U.S. to 1990 levels by the year 2000. The Third Conference of the Parties to the U.N. Framework Convention on Climate Change, to be held in December of 1997 in Kyoto, Japan, will attempt to implement binding agreements among member countries to ensure adequate reporting of, and compliance with greenhouse gas reduction plans.

Our national strategy relies on voluntary actions by corporations, state and local governments, and citizens whose efforts are assisted by technical support and outreach programs like Transportation Partners, Green Lights, and ENERGY STAR. To meet our goals for cutting greenhouse gas emissions, we need your assistance. You can help by driving your vehicle less. Combining shopping trips and ridesharing or telecommuting to work are great ways to start. Since in many places there are few attractive alternatives to driving, you can make a difference by getting involved in local transportation planning. Citizens and their local elected officials now have more opportunities to participate in transportation decisions than they have had in a long time. You can help get sidewalks and bikeways built or support strategies to reduce traffic in your neighborhood. Along the way, Transportation Partners can provide the technical support and information necessary to produce lasting results. Transportation Partners can help you make some smart moves for a healthier community... and a healthier planet.

In the next issue of *Shortcuts*: Updates from our Partners!